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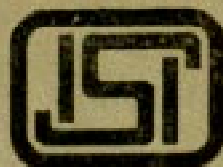
IS : 3272 - 1966

*Indian Standard*

**DIMENSIONS FOR  
OVAL-HEAD STEEL COWL  
VENTILATORS**

( First Reprint APRIL 1983 )

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**INDIAN STANDARDS INSTITUTION**  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI 110002

# Indian Standard

## DIMENSIONS FOR OVAL-HEAD STEEL COWL VENTILATORS

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**INDIAN STANDARDS INSTITUTION  
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG  
NEW DELHI**

# *Indian Standard*

## DIMENSIONS FOR OVAL-HEAD STEEL COWL VENTILATORS

### 0. FOREWORD

**0.1** This Indian Standard was adopted by the Indian Standards Institution on 25 February 1966, after the draft finalized by the Marine Engineering and Shipbuilding Sectional Committee had been approved by the Mechanical Engineering Division Council.

**0.2** This standard is one of a series of Indian Standards on cowl ventilators. Other standards in the series are:

IS : 3271-1966 General requirements for steel cowl ventilators with detachable components

IS : 3273-1966 Dimensions for circular-head steel cowl ventilators

IS : 3275-1966 Dimensions for accessories for steel cowl ventilators\*

IS : 3276-1966 Dimensions for mechanical turning arrangements for steel cowl ventilators

IS : 3277-     Dimensions for coamings for steel cowl ventilators  
(*under preparation*)

IS : 3278-1966 Dimensions for detachable coaming covers and wire mesh grids for steel cowl ventilators

**0.3** In the preparation of this standard, assistance has been derived from the following standards issued by Association Francaise de Normalization:

NF J 46-112 : 1951 Manches a air frais—pavillon tronconique (cowl ventilator—tori-conical head)

NF J 46-114 : 1951 Manches a air frais—pavillon ovale (cowl ventilator—oval head)

**0.4** Indian Standard general requirements for steel cowl ventilators with detachable components (IS : 3271-1966) is a necessary adjunct to this standard.

**0.5** For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS : 2-1960\*. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

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\*Rules for rounding off numerical values (*revised*).

## 1. SCOPE

1.1 This standard specifies the dimensions for three types, namely, A, B and C of oval-head detachable type steel cowl ventilators, of nominal sizes 150 to 1 600 mm for sea-going vessels.

## 2. DESCRIPTION

2.1 The construction of the oval-head steel cowl ventilators of types A, B and C shall be as shown in Tables 1, 2 and 3 respectively. A beading bar or a half section pipe shall be welded to the mouth.

## 3. MATERIAL

3.1 The materials for construction of steel cowl ventilators shall be as given in IS : 3271-1966\*.

## 4. DIMENSIONS AND TOLERANCES

4.1 The dimensions for Type A, Type B and Type C oval-head steel cowl ventilators shall be as given in Tables 1, 2 and 3 respectively.

4.2 The tolerances shall be as given in IS : 3271-1966\*.

## 5. DESIGNATION

5.1 The oval-head steel cowl ventilators shall be designated by the name, type, the nominal size and number of the standard.

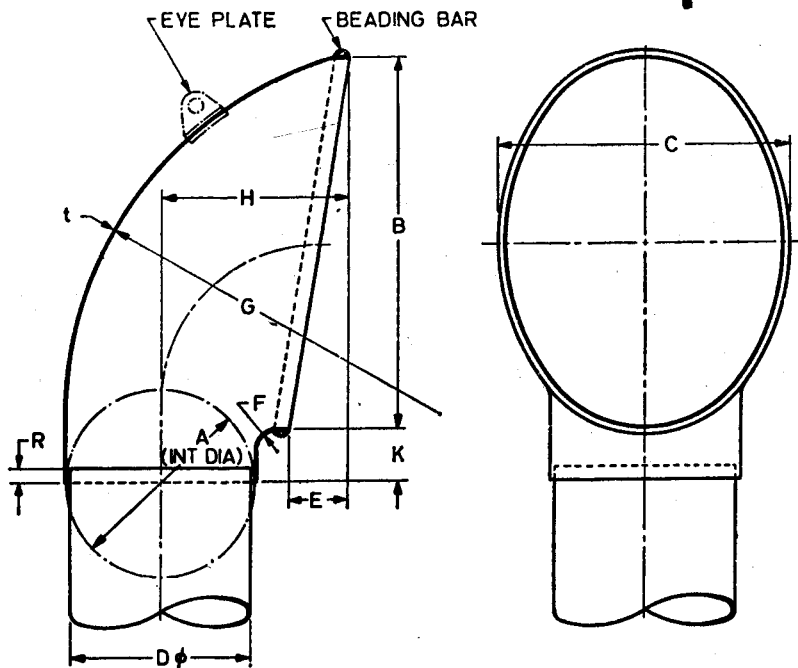
### *Example :*

An oval-head steel cowl ventilator of Type A having a nominal size of 300 mm, conforming to this standard, shall be designated as:

Oval-Head Steel Cowl Ventilator Type A 300 IS : 3272-

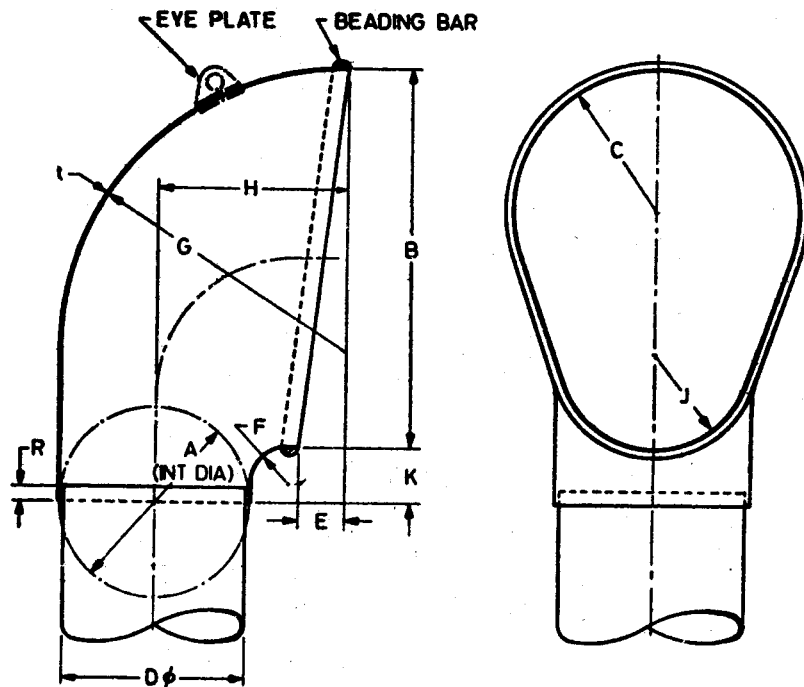
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\*General requirements for steel cowl ventilators with detachable components.

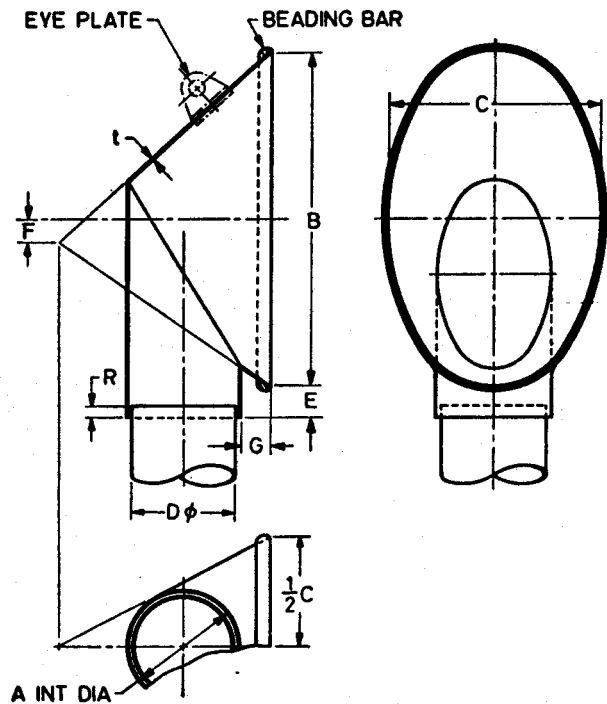
**TABLE 1 DIMENSIONS FOR TYPE A OVAL-HEAD STEEL COWL VENTILATORS***(Clauses 2.1 and 4.1)**(All dimensions in millimetres)*



NOMI- NAL SIZE D	A (D+2t)	B (2D)	C (1.5D)	E (0.24D)	F	G (2D)	H (D)	K	t	BEAD- ING BAR	DIA OF RIV- ETS	OVER- LAP R	NO. OF RIV- ETS
150	153.2	300	225	36	16	300	150	50	1.60	18×6	6	16	4
200	203.2	400	300	48	24	400	200	57	1.60	18×6	6	16	4
250	253.2	500	375	60	32	500	250	64	1.60	18×6	6	16	4
300	303.2	600	450	72	40	600	300	70	1.60	18×6	6	16	4
350	354.0	700	525	84	45	700	350	76	2.00	25×6	6	22	6
400	404.0	800	600	96	50	800	400	85	2.00	25×6	6	22	6
450	454.0	900	675	108	58	900	450	95	2.00	25×6	6	22	6
500	504.0	1 000	750	120	65	1 000	500	105	2.00	25×6	6	22	6
550	554.0	1 100	825	132	75	1 100	550	115	2.00	25×6	6	22	6
600	604.0	1 200	900	144	85	1 200	600	125	2.00	25×6	6	22	6
700	705.0	1 400	1 030	168	95	1 400	700	150	2.50	30×10	8	28	8
800	805.0	1 600	1 200	192	105	1 600	800	180	2.50	30×10	8	28	8
900	905.0	1 800	1 350	216	120	1 800	900	180	2.50	30×10	8	28	8
1 000	1 006.3	2 000	1 500	240	130	2 000	1 000	205	3.15	35×14	8	28	8
1 100	1 106.3	2 200	1 650	264	145	2 200	1 100	205	3.15	35×14	8	28	8
1 250	1 256.3	2 500	1 875	300	160	2 500	1 250	205	3.15	35×14	8	28	8
1 400	1 406.3	2 800	2 100	336	180	2 800	1 400	250	3.15	35×14	8	28	8
1 600	1 606.3	3 200	2 400	384	220	3 200	1 600	250	3.15	35×14	8	28	8

**TABLE 2 DIMENSIONS FOR TYPE B OVAL-HEAD STEEL COWL VENTILATORS***(Clauses 2.1 and 4.1)**(All dimensions in millimetres)*

NOMI- NAL SIZE <i>D</i>	<i>A</i> ( <i>D</i> +2 <i>t</i> )	<i>B</i> (2 <i>D</i> )	<i>C</i> (0.75 <i>D</i> )	<i>E</i> (0.25 <i>D</i> )	<i>F</i> (0.2 <i>D</i> )	<i>G</i> (1.5 <i>D</i> )	<i>H</i> ( <i>D</i> )	<i>J</i> (0.5 <i>D</i> )	<i>K</i>	<i>t</i>	OVER- LAP <i>R</i>	BEAD- ING BAR	DIA OF RIV- ETS	No. OF RIV- ETS
150	153.2	300	113	38	30	225	150	75	46	1.60	16	18×6	6	4
200	203.2	400	150	50	40	300	200	100	56	1.60	16	18×6	6	4
250	253.2	500	188	63	50	375	250	125	66	1.60	16	18×6	6	4
300	303.2	600	225	75	60	450	300	150	76	1.60	16	18×6	6	4
350	354.0	700	263	88	70	525	350	175	92	2.00	22	25×6	6	6
400	404.0	800	300	100	80	600	400	200	102	2.00	22	25×6	6	6
450	454.0	900	338	113	90	675	450	225	112	2.00	22	25×6	6	6
500	504.0	1 000	375	125	100	750	500	250	122	2.00	22	25×6	6	6
550	554.0	1 100	413	138	110	825	550	275	132	2.00	22	25×6	6	6
600	604.0	1 200	450	150	120	900	600	300	142	2.00	22	25×6	6	6
700	705.0	1 400	525	175	140	1 050	700	350	168	2.50	28	30×10	8	8
800	805.0	1 600	600	200	160	1 200	800	400	188	2.50	28	30×10	8	8
900	905.0	1 800	675	225	180	1 350	900	450	208	2.50	28	30×10	8	8
1 000	1 006.3	2 000	750	250	200	1 500	1 000	500	228	3.15	28	35×14	8	8
1 100	1 106.3	2 200	825	275	220	1 650	1 100	550	248	3.15	28	35×14	8	8
1 250	1 256.3	2 500	938	313	250	1 875	1 250	625	278	3.15	28	35×14	8	8
1 400	1 406.3	2 800	1 050	350	280	2 100	1 400	700	308	3.15	28	35×14	8	8
1 600	1 606.3	3 200	1 200	400	320	2 400	1 600	800	348	3.15	28	35×14	8	8

**TABLE 3 DIMENSIONS FOR TYPE C OVAL-HEAD STEEL COWL VENTILATORS***(Clauses 2.1 and 4.1)**(All dimensions in millimetres)*

NOMINAL SIZE, $D$	$A$ $(D+2t)$	$B$ $(3D)$	$C$ $(1.9D)$	$E$	$F$ $(0.2D)$	$G$ $(0.25D)$	$t$	BEADING BAR	DIA OF RIVETS	OVER- LAP R	NO. OF RIVETS
150	153.2	450	285	50	30	38	1.60	18 × 6	6	16	4
200	203.2	600	380	57	40	50	1.60	18 × 6	6	16	4
250	253.2	750	475	64	50	63	1.60	18 × 6	6	16	4
300	303.2	900	570	75	60	75	1.60	18 × 6	6	16	4
350	354.0	1 050	665	76	70	88	2.00	25 × 6	6	22	6
400	404.0	1 200	760	89	80	100	2.00	25 × 6	6	22	6
450	454.0	1 350	855	102	90	113	2.00	25 × 6	6	22	6
500	504.0	1 500	950	102	100	125	2.00	25 × 6	6	22	6
550	554.0	1 650	1 040	125	110	138	2.00	25 × 6	6	22	6
600	604.0	1 800	1 140	150	120	150	2.00	25 × 6	6	22	6
700	705.0	2 100	1 330	180	140	175	2.50	30 × 10	8	28	8
800	805.0	2 400	1 520	180	160	200	2.50	30 × 10	8	28	8
900	905.0	2 700	1 710	180	180	225	2.50	30 × 10	8	28	8
1 000	1 006.3	3 000	1 900	205	200	250	3.15	35 × 14	8	28	8
1 100	1 106.3	3 300	2 090	205	220	275	3.15	35 × 14	8	28	8
1 250	1 256.3	3 750	2 375	205	250	313	3.15	35 × 14	8	28	8
1 400	1 406.3	4 200	2 660	250	280	350	3.15	35 × 14	8	28	8
1 600	1 606.3	4 800	3 040	250	320	400	3.15	35 × 14	8	28	8

(Continued from page 1)

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# INTERNATIONAL SYSTEM OF UNITS ( SI UNITS)

## Base Units

QUANTITY	UNIT	SYMBOL
Length	metre	m
Mass	kilogram	kg
Time	second	s
Electric current	ampere	A
Thermodynamic temperature	kelvin	K
Luminous intensity	candela	cd
Amount of substance	mole	mol

## Supplementary Units

QUANTITY	UNIT	SYMBOL
Plane angle	radian	rad
Solid angle	steradian	sr

## Derived Units

QUANTITY	UNIT	SYMBOL	DEFINITION
Force	newton	N	1 N = 1 kg.m/s <sup>2</sup>
Energy	joule	J	1 J = 1 N.m
Power	watt	W	1 W = 1 J/s
Flux	weber	Wb	1 Wb = 1 V.s
Flux density	tesla	T	1 T = 1 Wb/m <sup>2</sup>
Frequency	hertz	Hz	1 Hz = 1 c/s (s <sup>-1</sup> )
Electric conductance	siemens	S	1 S = 1 A/V
Electromotive force	volt	V	1 V = 1 W/A
Pressure, stress	pascal	Pa	1 Pa = 1 N/m <sup>2</sup>

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